

**Political Science Scope  
and Methods**

**Observation, Measurement, and  
Political Implications**

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**Onto the Nuts and Bolts...**

- This week: Measurement (part 1)
- Important Concepts
  - Operationalization
  - Reliability and Validity
  - Unbiasness and Efficiency
- Putnam Example

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**Measurement: An Introduction**

- Steps in Measurement
  - Operational definition
  - Agreement?
  - Levels of measurement
    - Nominal
    - Ordinal
    - Interval

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## Reliability and Validity

- **Reliability:** Extent to which measurement procedure yields same result on repeated trials
  - Example: 2000 Presidential election
- **Validity:** How well the measure we use corresponds to the underlying concept
  - Face validity
  - Construct validity
  - Multiple measures – inter-item association

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## Unbiasness and Efficiency

- **Unbiased Measure:** estimate centered on the truth
- **Efficient Measure:** reducing the bound of uncertainty around a point estimate as much as possible

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## Threats to Unbiasness and Efficiency

- **Measurement error**
  - Non-random error
  - Random error
    - In DV: increases uncertainty
    - In IV: attenuates estimate of effect (but careful!)
- **Omitted Variable Bias**
  - If your IV of interest is correlated with another IV that is also correlated with your DV ⇒ **Bias**

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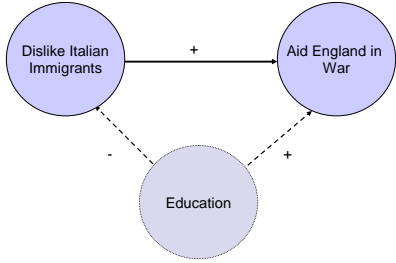
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### Omitted Variable Bias: WWII Example



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### Taking it too far...

- Can't control for every omitted variable
- Control for important plausible alternative hypotheses
- Tradeoff with efficiency
- Bottom line: data is precious, use it wisely

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### Putnam Example

- 12 Indicators in 3 areas
  - Policy process
  - Policy pronouncements
  - Policy implantation
- Is Putnam the model?
  - Validity?
  - Reliability?

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